What is claimed is:

1. In a CDM simulator for providing a rapid discharge of an electrical current transient to test an electrical device under test, a test circuit comprising:

an electrically conductive material having a dielectric layer coextensively disposed thereon, said layer being adapted to receive said device when said device is under test;

a charge capacitor;

a normally open discharge switch electrically coupled in series between said electrically conductive material and said charge capacitor defining a first node between said charge capacitor and said discharge switch, said first node being adapted to have a power source resistively connected thereto to store a charge on said charge capacitor; and

a resistor adapted to be electrically connected in series between said charge capacitor and said device when said device is under test defining a second node between said resistor and said charge capacitor, said second node being normally grounded, whereby closing of said discharge switch subsequent to said charge being stored on said charge capacitor causes said current transient to be discharged through said device under test.

2. A test circuit as set forth in Claim 1 wherein said discharge switch is a wet relay switch.

3. A test circuit as set forth in Claim 1 wherein said discharge switch is a mercury switch.

4. A test circuit as set forth in Claim 1 further comprising a connection wire to be coupled electrically intermediate said resistor and said device under test.

5. A test circuit as set forth in Claim 4 wherein said connection wire has a predetermined inductance per unit length.

6. A test circuit as set forth in Claim 1 wherein said electrically conductive material is a charge plate having a first surface, said dielectric material being disposed on said first surface.

7. A test circuit as set forth in Claim 1 further comprising a decoupling resistor electrically connected to said first node, said power source being adapted to connect to said resistor.

8. A CDM simulator for providing a rapid discharge of an electrical current transient to a device under test comprising:

an electrically conductive material having a dielectric layer coextensively disposed thereon, said layer being adapted to receive said device when said device is under test;

a charge capacitor;

a normally open discharge switch electrically coupled in series between said electrically conductive material and said charge capacitor defining a first node between said charge capacitor and said discharge switch;

a power source resistively connected to said first node to store a charge on said charge capacitor; and

a resistor adapted to be electrically connected in series between said charge capacitor and said device when said device is under test defining a second node between said resistor and said charge capacitor, said second node being normally grounded, whereby closing of said discharge switch subsequent to said charge being stored on said charge capacitor causes said current transient to be discharged through said device under test.

9. A CDM simulator as set forth in Claim 8 wherein said discharge switch is a wet relay switch.

10. A CDM simulator as set forth in Claim 8 wherein said discharge switch is a mercury switch.

11. A CDM simulator as set forth in Claim 8 further comprising a connection wire to be coupled electrically intermediate said resistor and said device under test.

12. A CDM simulator as set forth in Claim 11 wherein said connection wire has a predetermined inductance per unit length.

13. A CDM simulator as set forth in Claim 8 wherein said electrically conductive material is a charge plate having a first surface, said dielectric material being disposed on said first surface.

14. A CDM simulator as set forth in Claim 8 further comprising a decoupling resistor electrically connected between said power source and said first node.

15. A method for providing a rapid discharge of an electrical current transient to test *in situ* an electrical device comprising:

spacing proximally said device from an electrically conductive material;

connecting resistively said device to ground potential; and

injecting an electrical charge into said electrically conductive material whereby said current transient is discharged through said device.

16. A method as set forth in Claim 15 wherein said spacing includes placing a dielectric material intermediate said electrically conductive material and said device.

17. A method as set forth in Claim 15 wherein said injecting includes:

charging a charge capacitor to store said charge thereon;

switching said charge to electrically conductive material.

18. A method as set forth in Claim 15 further comprising varying the inductance of a discharge path of said current transient.

19. A method as set forth in Claim 18 wherein said varying includes electrically connecting variable lengths of a connection wire having a predetermined inductance per unit length in series between said device and ground potential.

20. A method for providing a rapid discharge of an electrical current transient to test *in situ* an electrical device comprising:

placing a layer of a dielectric material on a first surface of a discharge plate of an electrically conductive material, said device being placed on said layer;

connecting a resistor in series between said device and ground potential;

connecting a normally open discharge switch and a charge capacitor in series between said resistor and said discharge plate wherein a first node is defined between said discharge switch and said discharge capacitor and a second node is defined between said resistor and discharge capacitor, said second node being coupled to ground potential; and

storing a charge on said charge capacitor, whereby closing of said discharge switch injects said charge into said electrically conductive material whereby said current transient is discharged through said device.

21. A method as set forth in Claim 20 wherein said storing includes connecting a power source through a decoupling resistor to said first node when said discharge switch is open.

22. A method as set forth in Claim 20 further comprising varying the inductance of a discharge path of said current transient.

23. A method as set forth in Claim 22 wherein said varying includes electrically connecting variable lengths of a connection wire having a predetermined inductance per unit length in series between said device and said resistor.